DOCUMENT RESUME

ED 033 824 RE 001 958

AUTHOR	Jones, Bert; And Others
TITLE	A Study of Remedial Reading Programs in the Omaha and Marquette Job Corps Centers for Women.
INSTITUTION	Burroughs Corp., Detroit, Mich.; Northern Michigan Univ., Marquette.
Spons Agency	Office of Economic Opportunity, Washington, D.C.
Pub Date	[69]
Note	43p.
EDRS Price	EDRS Price MF-$0.25 HC-$2.25
Descriptors	*Adult Reading Programs, Group Norms, Job Training, *Poverty Programs, Psychometrics, Reading Improvement, Reading Research, *Reading Tests, *Remedial Reading Programs

Abstract

This joint investigation involving the Omaha Job Corps Center for Women and the Marquette Job Corps Center for Women assessed the remedial reading programs of the two centers. A major objective was to provide Job Corps norms for the Gates-MacGinitie Reading Test, Survey E, forms 1M and 2M. Each center designated control and experimental groups. The experimental groups' 80 subjects received 40 class hours of reading instruction. The control group's 37 received no formalized reading instruction. The Wilcoxon Matched-Pairs Signed-Ranks Test was used for within groups data analyses; the Mann-Whitney U Test and the Moses Test of Extreme Reaction were used for between groups analyses. Significant differences were found between the experimental and the control groups and between pretesting and post-testing on the comprehension subtest for those subjects rated at a fourth grade, ninth month and below reading level at time of entry into the program. This led to the conclusion that these remedial reading programs were best able to help the lower-level reader. The control group in Marquette showed significant gains on the vocabulary subtest. A strong relationship between formal education and reading achievement was noted. Data tables and charts are included. (Author/WB)

RE

F-OEO

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

NORTHERN MICHIGAN UNIVERSITY

BURROUGHS CORPORATION

ED033824

JOINT READING STUDY

MARQUETTE WOMEN'S JOB CORPS

OMAHA WOMEN'S JOB CORPS

RE001 958

ED033824

ABSTRACT

This joint investigation involving the Omaha Job Corps Center for Women and the Marquette Job Corps Center for Women was designed to asses the characteristics of the Job Corps remedial reading programs. The focus of the study was concentrated on the assessment of the individual enrollee, each centers remedial reading program and similarities and differences between each center. One of the major objectives of this study was to provide Job Corps norms for the Gates-Mac Ginitie Reading Test.

Two group of enrollee's were designated at each center. The experimental groups of 80 receiving 40 class hours of reading instruction and the control group of 37 receiving no formalized reading instruction.

Significant differences were found between the experimental and control groups and between pre and post testing for the subtest comprehension for those subjects rated at a fourth grade, ninth month and below reading levels at time of entry into the program. This difference was not found for the group of subjects rated at fifth grade and above. This led to the conclusion that remedial reading programs were best able to handle the problem of the lower level reader (fourth grade, ninth month and below). Further it was ascertained that the control group in Marquette significantly progressed on the subtest of vocabulary indicating a favorable condition within the Marquette Center. The relationship between formal education and reading achievement was also strongly supported.

A STUDY OF REMEDIAL READING PROGRAMS IN THE OMAHA AND MARQUETTE JOB CORPS CENTERS FOR WOMEN

by

Bert Jones, Charles Myrbach, Joan Cooper and Guy More

Sponsored by the Burroughs Corporation
and Northern Michigan University

INTRODUCTION

Job Corps centers constitute a major division of the War on Poverty. The young corpswomen and corpsmen attending these centers present a vast range of unique social and educational problems. Educational innovations have thus become a necessity in dealing with these problems. Staff in all centers have found it necessary to modify old educational techniques and to create new methodologies in meeting the learning needs of Job Corps populations. However, educational programs have been based largely on subjective observations or intuition. Very little objective information is available to guide Job Corps educators.

This study is devoted to an analysis of the effect of special reading programs on Job Corps populations at the Omaha and Marquette Centers. A side product of this study is the compilation of normative data derived from intelligence scores, achievement scores, and demographic information relevant to the corpswomen of the two Centers.

Background of Study Population

As of June 1, 1968, there were 9,683 females in Job Corps centers for women. The combined Omaha-Marquette Job Corps Centers have a population of 1,150 or 11.9 per cent of the total population in women's centers.

Sixty per cent of the girls are from broken homes and 63 per cent of the heads of households are unemployed. Forty per cent of heads of households are on relief. Fifty per cent of the corpswomen's parents have less than an eighth grade education.

Five per cent of the corpswomen are from rural areas, 35 per

cent are from small towns, and 60 per cent are from cities of 100,000 population or more.

Eighty per cent of the corpswomen lack previous medical care. The average age of the corpswomen is nineteen. The average for highest grade completed is 9.8 while the average reading and math achievement levels are 6.2 and 5.5 respectively.

Rationale for Joint Omaha-Marquette Study

The mutual interest of the Omaha and Marquette Job Corps Centers for Women in the need for objective data for guidance and evaluation of their education programs provided a unique opportunity to study the differential effect of two center programs operated in widely different settings. The initial assumption was made that the input populations of the two centers would be homogenous.

The Omaha Center is located in a metropolitan area and is sponsored by the Burroughs Corporation, while the Marquette Center is sponsored by Northern Michigan University and is located in a small town. The Omaha Center is housed in two downtown hotel buildings. In contrast, the Marquette Center is housed on the University's campus in a dormitory and special classroom and office building. Thus, this study of the reading programs in the two centers provides for both an analysis of between center and within center differences.

The Problem

A common characteristic of disadvantaged populations is a low level of reading ability. This fact has required centers to establish special remedial reading programs whose subjects are

determined by various reading tests. Objective data, however, are not available to show whether gains in reading are due to the special effect of the reading program, or instead due to the effect of previous experience of study subjects. This problem further suggests the following specific questions:

1. To what extent is the reading ability of subjects in special reading programs changed in contrast to like subjects who do not participate in special reading classes, but who are exposed to all other phases of a center's education program?
2. Is there a difference in the effect of the reading program in Marquette and Omaha Centers on like subjects?
3. Do like subjects in Omaha and Marquette Centers who are not in special reading programs progress at the same reading rate?
4. Does grade level achievement in public schools prior to entry into Job Corps affect reading progress in the special reading program?
5. Is age of reading program subjects a factor in reading progress?
6. Does a rural versus urban background of reading program subjects affect reading progress?

PROCEDURE

Design of Study

The study design included an experimental and control group for each center. Qualification of subjects for the study

was based on scores made on the Gates-Mac Ginitie Reading Test. Preliminary analysis of the data revealed that there was a greater sensitivity for reading progress for subjects who scored at fourth grade, ninth month or below than for those subjects who scored at the level of fifth grade and above. It was felt that data analysis would be more meaningful if this dichotomy was made.

Analysis of differences between groups was based on pretest and posttest scores for the subtests of Comprehension and Vocabulary (see Chart I on following page). Speed and accuracy subtests scores were omitted because of data deficiencies in the two areas.

Instruments Used

The Gates-Mac Ginitie Reading Test, Survey E, forms 1M and 2M, was chosen because it provides a good index of reading progress rather than depth analysis of reading ability. The test is also easy to administer thus minimizing tester errors. Form 1M was used for the pretest and Form 2M was used for the posttest.

Sampling and Method of Subject Input

All new enrollees at each Center were given Form 1M of the Gates-Mac Ginitie Reading Tests. A total score of 7.9 reading achievement level qualified an enrollee for study participation. Subjects were drawn from this pool of candidates for the experimental and control groups on a random basis until the quota for each group was reached. Both Centers observed a mutual agreement not to include any corpswoman who had been in the Center

CHART 1. STUDY DESIGN

	EXPERIMENTAL GROUP										CONTROL GROUP										
	OMAHA					MARQUETTE					OMAHA					MARQUETTE				
	SUBJECTS	Speed & Accuracy Attempted	Speed & Accuracy Correct	Comprehension	Vocabulary	SUBJECTS	Speed & Accuracy Attempted	Speed & Accuracy Correct	Comprehension	Vocabulary	SUBJECTS	Speed & Accuracy Attempted	Speed & Accuracy Correct	Comprehension	Vocabulary	SUBJECTS	Speed & Accuracy Attempted	Speed & Accuracy Correct	Comprehension	Vocabulary	
PRE	1 2 3 . . . n					1 2 3 . . . n					1 2 3 . . . n					1 2 3 . . . n					
POST	1 2 3 . . . n					1 2 3 . . . n					1 2 3 . . . n					1 2 3 . . . n					

more than thirty days, or who had previously taken the Gates-Mac Ginitie Test.

The enrollees who qualified for the reading project were then enrolled into either the reading class or control group. Each center enrolled fifty girls into the reading class and 25 girls into the control group. Each girl in the experimental group was required to complete 40 class sessions before taking the posttest and leaving the reading class. After 40 days of regular class attendance, the members of the control group were also administered the posttest.

After a total of 50 girls were enrolled into the reading class and the 25 girls were placed in the Control Group, no replacements were made for the enrollees who left the program for one reason or another. At the close of the program the Marquette project has 45 girls who had completed the 40 sessions of the remedial reading class and 22 girls in the Control Group who were exposed only to the general education program for the required 40 days.

The Omaha retention rate was 35 corpswomen in the Experimental Group, while 15 were left in the Control Group.

Reading Teaching Methodologies in Omaha and Marquette Centers

The stated objectives of the Reading Laboratories at each Center are similar: to develop the reading skills of the corpswomen to a level required for job entry in her particular vocational choice. An additional objective is to stimulate reading for enjoyment.

The motivational techniques of each center were similar

with the overriding technique being a deep and abiding interest in corpswomen, and an intense desire to help them read better.

Both centers used a combination of visual, audio and kinesthetic techniques, although the Marquette Center's emphasis was on the audio-visual methods.

Similar teaching devices were used at both centers. However, the teaching emphasis placed on the devices differed.

The Omaha Center lists the following teaching aids as being used in its reading program:

1. Aud-X Learning 100 program
2. Language Master
3. Controlled Reader
4. Barnell Loft Specific Series
5. Tape Recorders
6. Paperbacks
7. Tach X
8. SRA Books
9. Play Books
10. Scrabble (word game)

The Marquette Center used the devices listed below:

1. Auto-tutor
2. Tape Recorder
3. SRA Reading Accelerator
4. Typewriter (large print)
5. Film strips (language usage)
6. Film projector
7. SRA Reading Kits

8. A variety of other reading materials dealing with phonics, word analysis and comprehension.

Individualized instruction was used at both centers. Reading speed, comprehension, and vocabulary were prime areas of concentration in the program at each center. One instructor at the Omaha Center, however, felt that she had emphasized comprehension more than speed and relied more on actual reading than on the mechanical aids available. She also emphasized oral reading. Her laboratory was the only one equipped with study carrels. With the availability of the Aud-X program, the Tach-X, and the controlled reader, the Omaha Center seems to have had more mechanical aids at their disposal than did the Marquette Center.

Class size differed. The Omaha program incorporated two classroom teachers whereas the Marquette reading classes were taught by one teacher, and, consequently, the classes were larger.

Reading Instruction Received by Control Groups

Marquette. The members of the Control Group received the same reading instruction that is given to all members of the regular general education classes. The requirements for each class is that they complete the Reading for Understanding series (junior level).

They also work on comprehension, speed, and word analysis in the SRA Reading kit. Their level of reading kit is determined by pretests. To graduate from the general education program, the corpswoman must read at a 7.5 grade level. If she wishes to

enroll in the G.E.D. prep class, she must read at an 8.5 grade level.

Any corpswoman who reads at a tested level of less than 5.0 is required to enroll into the Remedial Reading laboratory.

Omaha. Girls in the Control Group received no formal reading instruction, as such. However, they would have received reading training informally by the nature of the course work in Life Skills, Basic Education, and prevocation classes.

Techniques of Measurement

Most measurements in the study were made with nonparametric techniques. This was necessary because not all of the assumptions underlying parametric treatment of data could be met. This was particularly true of the assumption requiring normality of data. In some instances where combination of group data resulted in larger N's, parametric techniques were used.

The nonparametric procedures used were the Wilcoxon Matched-Pairs Signed-Ranks Test, the Mann-Whitney U Test, and Moses Test of Extreme Reaction. The Wilcoxon Test was applicable for within groups data analyses while the Mann-Whitney U Test and the Moses Test were used for between groups analyses.

RESULTS AND DISCUSSION

The data presented in this section are based on the results of testing 13 hypotheses. Test results for each hypothesis are discussed below.

Hypothesis 1. No significant difference exists between the pretest and posttest for the Omaha experimental groups.

Table 1 shows that the null hypothesis is rejected for the

subtests of vocabulary and comprehension on subjects rated at the fourth grade, ninth month or below. However, the null hypothesis could only be rejected on the vocabulary subtest for those subjects rated fifth grade and above. Thus, while the reading program produced significant gains for both subtests in the lower achievement group, the higher achievement group derived less benefit. This may be due to the fact that reading ability levels of the higher rated group were too high to be challenged by the reading program. This is borne out by the high mean of the fifth grade and above group on the pretest as compared to the means of the lower rated group on the pretest.

Hypothesis 2. No significant differences exist between the pretests and posttests for the Marquette experimental groups.

Table 2 indicates that the Marquette group experienced the same results as the Omaha group except that for Omaha the null hypothesis was rejected for the subtest of comprehension at a higher level of significance.

Hypothesis 3. No significant differences exist between the pretests and posttests for the Omaha control groups.

Hypothesis 4. No significant differences exist between the pretests and posttests for the Marquette control groups.

Null hypothesis three is accepted for all subtests as shown in Table 3. Thus for Omaha, the reading program produced significant improvement for experimental subjects, but exposure to the general program of the Center did not produce significant gains for the control subjects. Interestingly, however, the null hypothesis is rejected for Marquette's vocabulary subtest

scores for the subjects rathed in the lower reading level group (Table 4). This may indicate that general program climate in Marquette is more conducive to vocabulary gains than is Omaha's general program. Additional evidence of this possibility is given in Table 12, which compares posttest scores between Marquette and Omaha control groups.

Hypothesis 5. No significant differences exists between the experimental and control group subtests scores for the Omaha and Marquette Centers.

Reference to Table 5 reveals that Omaha's under fourth grade, ninth month experimental group gained significantly in reading comprehension compared to the control group. It should be noted that data in this table, and in the following table, are based on the mean of gains, or difference scores, between the pretest and posttest. The fact that the vocabulary subtest scores were not significant could be the effect of one or more of the following:

(a) Subjects were already so advanced in vocabulary before entering the experiment that gains between the pretest and posttest were too small to be significant.

(b) The reading program was not powerful enough to contrast general Center program effect to produce significant changes.

(c) The Gates-Mac Ginitie Test is not sensitive enough to disclose small gains in vocabulary.

(d) The statistical treatment of data was not powerful

enough to show changes.

The data show, however, that the reading program in Omaha is effective in teaching comprehension.

For the fifth grade and above, the data for Omaha experimental and control groups do not show significant gains between the pretests and posttests. As explained earlier, this effect is possibly due to the power of the reading program being focused on extremely low reading levels. Thus, there is less opportunity for significant reading gains for thos subjects already reading at a comparable level of fifth grade and above. There is also a possibility that the reading test is less sensitive to gains made by the fifth grade and above subjects.

For the Marquette differences in experimental and control groups (see Table 6), the previous discussion of Omaha results is applicable, except that Marquette's control group for fifth grade reading level and above shows a significant gain on the comprehension subtest. This significance could be attributed to positive factors operating in the general center program, or could have been due to negative factors in the remedial reading program.

Hypothesis 6. No pretest significant differences exist between the two Centers' experimental pretest scores.

Table 7 shows that Omaha experimental group subjects scored significantly higher on the subtest for comprehension. Thus the null hypothesis is rejected for that subtest. Assuming an error was not made in the random method of input, two possibilities could account for this difference: (1) tester

effect and (2) regionalized recruiting of enrollees. Great care was taken to minimize tester effect leaving the possibility of selective recruiting as the most likely contributing factor. Enrollees at the Omaha Center may have been influenced by a pre-Job Corps educational system or related factors that did not exist for Marquette enrollees.

Hypothesis 7. No posttest significant differences exist between the two Centers' experimental group subtest scores.

The null hypothesis as accepted is noted by Table 8. This outcome seems to emphasize that the impact of the Omaha and Marquette remedial reading programs is comparable. Major differences in the study seem to occur as a result of control group variations between centers and within centers.

Hypothesis 8. No pretest significant differences exist between the two Centers' control groups.

The null hypothesis is accepted indicating initial control group equivalency for Omaha and Marquette (See Table 9). This factor justifies combination of the two control groups for some areas of data analysis required by the study design.

Hypothesis 9. No posttest significant differences exist between the two Centers' control groups.

The null hypothesis is rejected in favor of Marquette for the subtest of vocabulary and accepted for the subtest of comprehension as indicated in Table 10. Again, there was apparently a favorable condition operating in Marquette's general Center program which was not present in Omaha's program. This could possibly be due to a greater degree of academic

emphasis in Marquette's general education and vocational education classes. Further study would be necessary to isolate such factors if they do, indeed, exist.

Hypothesis 10. There are no significant differences between rural and urban subjects' subtest scores.

For the purposes of this study, rural was defined as having a population of less than 10,000 and being at least 50 miles from a metropolitan center of 50,000 or more population. Study subjects were classified as urban for all other population bases.

The null hypothesis was accepted for all subtests as shown in Table 11. Thus prior educational experience in rural or urban schools as defined above had no influence on initial reading levels.

Hypothesis 11. Age is not a significant variable on the pretest with respect to subtest scores.

The null hypothesis is accepted as seen in Table 12. Age, therefore, apparently did not influence reading ability on the initial test. This finding may indicate that once a cutoff point was reached in reading learning, such as public school termination, further progress was minimal as the subject grew older.

Hypothesis 12. Past school achievement as measured by school grades completed has no significant effect on subtest scores on the pretest.

Hypothesis 13. Past school achievement as measured by school grades completed has no significant effect on subtest scores on

the posttest.

The null hypothesis on the pretest is rejected as indicated by the data in Table 13. Thus, there seems to be a strong relationship between formal school achievement and reading ability. However, the null hypothesis for posttest scores is accepted for comprehension and rejected for vocabulary subtests. The effect, therefore, of prior school achievement has a bearing on vocabulary gains in a remedial reading program but does not seem to effect gains in comprehension. This differential could be the result of many unknown variables. For example, one might speculate that a remedial reading program tends to build on vocabulary gains experienced in previous formal education experience, while neglecting the more difficult task of teaching comprehension. In turn, comprehension of reading material could be more closely related to such general factors as intelligence, which could increase the difficulty of the remedial reading task.

CONCLUSIONS

Based on the findings of this study the following conclusions were made:

1. For both the Marquette and Omaha Centers the reading program was of greatest benefit for subjects who were reading at the relatively low level of fourth grade, ninth month or below.
2. Participation of control subjects in the general education program in the Marquette Center resulted in significant increases in vocabulary, indicating that

there are factors in Marquette's general education program which seems to produce vocabulary gains equivalent to the effect of the special remedial program.

3. For both Marquette and Omaha the reading program produced significant gains in reading comprehension for subjects rated fourth grade, ninth month and below. It may be generalized, therefore, that remedial reading programs conducted in the same fashion as those at Marquette and Omaha Centers are not effective in teaching reading comprehension for subject who read at fifth grade level or above as measured by the Gates-Mac Ginitie Reading Test used in this study.
4. Within the limitations of this study no significant differences were found in reading achievement between rural and urban population based subjects. However, it should be noted that this study did not differentiate between subjects from rural aggrarian backgrounds and subjects who lived in small towns. Such a classification could have produced differences. This classification was not made because of the sample limitation of the number of enrollees.
5. Age was not a significant variable in reading achievement for subjects in this study.
6. Greater accomplishments in remedial reading programs may be expected in the area of vocabulary

for those subjects who have experienced higher levels of public school grade completion. Thus, a remedial reading teacher may find it profitable to give additional emphasis to the task of teaching reading comprehension regardless of the past educational experiences of her pupils.

RECOMMENDATIONS FOR CENTER PROGRAM CHANGES

The findings of this study, in some instances, confirmed existing practices while in other instances new program directions were indicated. Major study implications are listed below:

1. It is recommended that the remedial reading program be confined to enrollees who read at the fifth grade level or below as measured by the Gates-Mac Ginitie Test.
2. Further analysis of teaching methodolog related to vocabulary should be made for both Centers.
3. The use of the Gates-Mac Ginitie Reading Test has gained more validity with the establishment of Job Corps norms (See appendix). Therefore, it is recommended that these norms be incorporated into the evaluation of the test results.
4. The Gates-Mac Ginitie Test should be supplemented by other reading tests having diagnostic power.

IMPLICATIONS FOR FURTHER RESEARCH STUDIES

Based on the findings of this study listed below are suggestions for further research:

1. Cross validation of the present results. This could be done by enlarging the present sample which would permit use of parametric techniques leading to the recovery of large quantities of data than was possible in the present study.
2. Item analysis of the Gates-Mac Ginitie Reading Test. This research would durther enhance the use of the Gates-Mac Ginitie Reading Test for Job Corps populations.
3. Other specific questions raised by this study suggests research in the following additional areas:

   a) In-depth proble of rural - urban hypothesis.

   b) Analysis of general Center program effect on reading ability.

   c) The use of the Gates-Mac Ginitie Reading Test in conjunction with a diagnostic reading test.

   d) Study of male and female reading performance.

   e) Study of the relationship of reading performance of enrollees who participation is remedial reading programs to employment success after Job Corps graduation.

TABLE 1

Omaha Experimental Group--
Pretest and Posttest Differences

Group	N	Means: Vocabulary	Means: Comprehension
Fourth Grade Ninth Month and Below			
Experimental Pretest	15	9.87	15.60
Experimental Posttest	15	12.67*	19.27**
Fifth Grade and Above			
Experimental Pretest	20	17.70	32.45
Experimental Posttest	20	19.90*	31.30

Note: Wilcoxon Matched--Pairs Signed--Ranks Test

* $P \leq .05$
** $P \leq .02$

TABLE 2

Marquette Experimental Group--
Pretest and Posttest Differences

Group	N	Means: Vocabulary	Means: Comprehension
Fourth Grade Ninth Month and Below			
Experimental Pretest	24	11.92	14.25
Experimental Posttest	24	15.92**	19.79**
Fifth Grade and Above			
Experimental Pretest	21	17.86	28.61
Experimental Posttest	21	19.90*	26.76

Note: Wilcoxon Matched--Pairs Signed--Ranks Test

*$P \leq .05$
**$P \leq .01$

TABLE 3

Omaha Control Group--
Pretest and Posttest Differences

Group	N	Means: Vocabulary	Means: Comprehension
Fourth Grade Ninth Month and Below			
Control Pretest	8	11.63	17.38
Control Posttest	8	13.13	17.00
Fifth Grade and Above			
Control Pretest	7	17.00	33.29
Control Posttest	7	17.57	32.42

Note: Wilcoxon Matched--Pairs Signed--Ranks Test

TABLE 4

Marquette Control Group--
Pretest and Posttest Differences

Group	N	Means: Vocabulary	Means: Comprehension
Fourth Grade Ninth Month and Below			
Control Pretest	10	10.20	16.50
Control Posttest	10	14.40*	16.80
Fifth Grade and Above			
Control Pretest	12	19.75	29.92
Control Posttest	12	21.17	31.58

Note: Wilcoxon Matched--Pairs Signed--Ranks Test

* $P \overline{>} .01$

TABLE 5

Omaha Experimental and
Control Differences

Group	N	Mean Gains: Vocabulary	Mean Gains: Comprehension
Fourth Grade Ninth Month and Below			
Experimental Pretest	15	2.8	3.70*
Control Pretest	8	1.5	- .38
Fifth Grade and Above			
Experimental Pretest	20	2.2	- .40
Control Pretest	7	.57	- .86

Note: Moses Test of Extreme Reactions

* $P \overline{>} .05$

TABLE 6

Marquette Experimental and
Control Differences

Group	N	Mean Gains: Vocabulary	Mean Gains: Comprehension
Fourth Grade Ninth Month and Below			
Experimental Pretest	24	4.0	5.13*
Control Pretest	10	4.2	.30
Fifth Grade and Above			
Experimental Pretest	21	2.05	-1.86
Control Pretest	12	1.71	1.08*

Note: Moses Test of Extreme Reactions

* $P \overline{>} .05$

TABLE 7

Pretest Experimental Group
Differences Between Centers

Center	N	Meand Vocabulary	Meand Comprehension
Omaha	34	14.53	25.06*
Marquette	45	14.69	20.96

Note: Mann Whitney U Test

* $P \overline{>} .05$

TABLE 8

Posttest Experimental Group
Differences Between Centers

Center		Means	
	N	Vocabulary	Comprehension
Omaha	34	16.91	26.15
Marquette	45	17.66	22.71

Note: Mann Whitney U Test

TABLE 9

Pretest Control Group
Differences Between Centers

Center		Means	
	N	Vocabulary	Comprehension
Omaha	15	14.13	24.80
Marquette	22	15.41	23.82

Note: Mann Whitney U Test

TABLE 10

Posttest Control Group
Differences Between Centers

Center		Means	
	N	Vocabulary	Comprehension
Omaha	15	15.20	24.20
Marquette	22	18.09*	24.64

Note: Mann Whitney U Test

** $P \leq .02$

TABLE 11

Rural-Urban Differences

Population Base	Means		
	N	Vocabulary	Comprehension
Rural	45	14.02	21.71
Urban	106	15.08	23.19

Note: t-test

TABLE 12

Pretest Age Differences
on Subtest Scores

Age	Means		
	N	Vocabulary	Comprehension
16, 17, 18	99	14.93	22.82
19, 20, 21	52	14.56	23.12

Note: t-Test

TABLE 13

Highest Grade Completed - Pretest

Grades		Means	
	N	Vocabulary	Comprehension
6, 7, 8, 9	36	11.77	17.77
10, 11, 12	44	16.58***	25.91***

Highest Grade Completed - Posttest

Grades		Means	
	N	Vocabulary	Comprehension
6, 7, 8, 9	35	15.53	22.42
10, 11, 12	45	18.89*	26.07

Note: t-Test

* $P \leq .05$
*** $P \leq .01$

FIGURE 1

OMAHA EXPERIMENTAL GROUP
PRE AND POST TEST DIFFERENCES

4th GRADE 9th MONTH AND BELOW

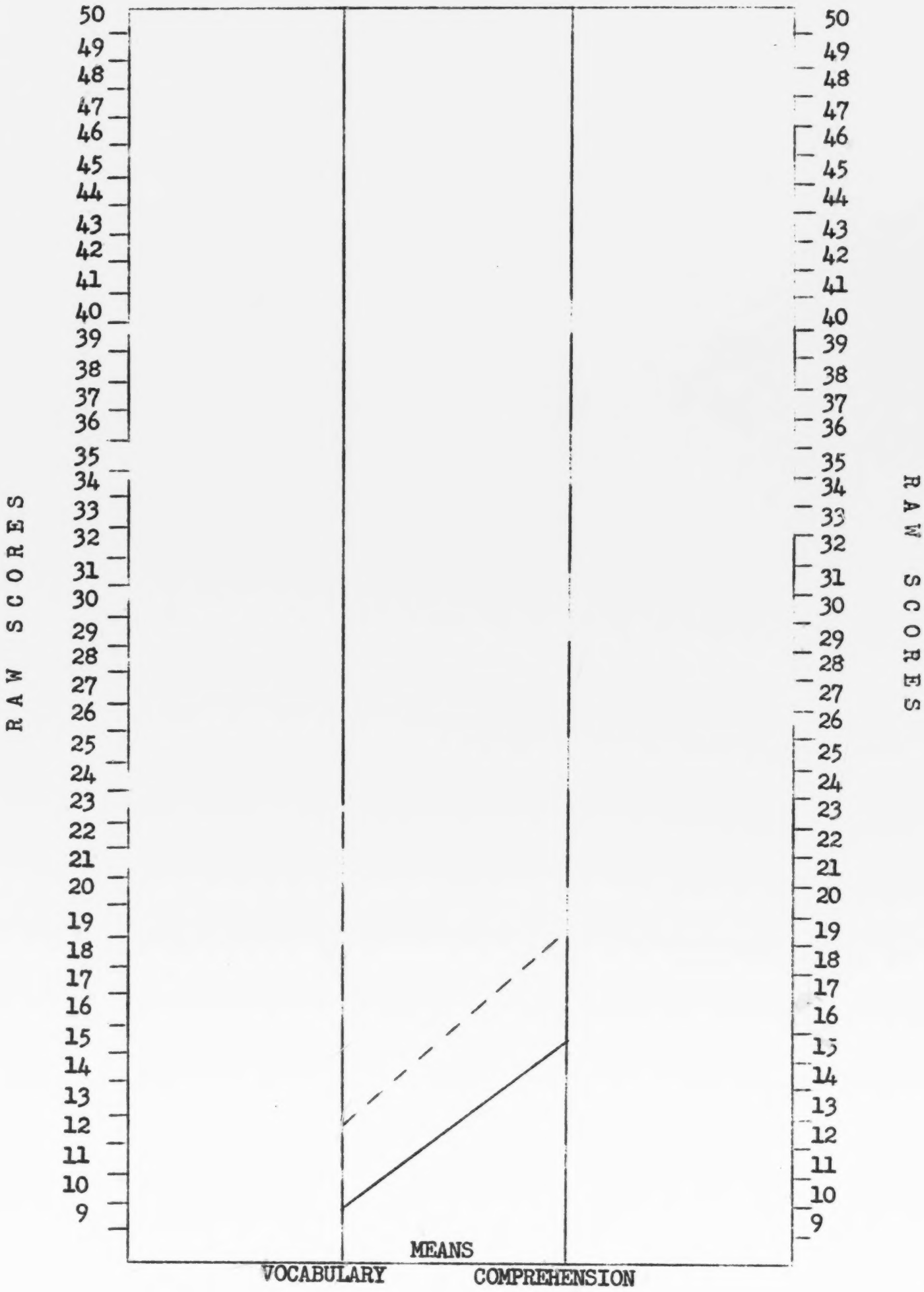


FIGURE 2

OMAHA EXPERIMENTAL GROUP
PRE AND POST TEST DIFFERENCES

5th GRADE AND ABOVE

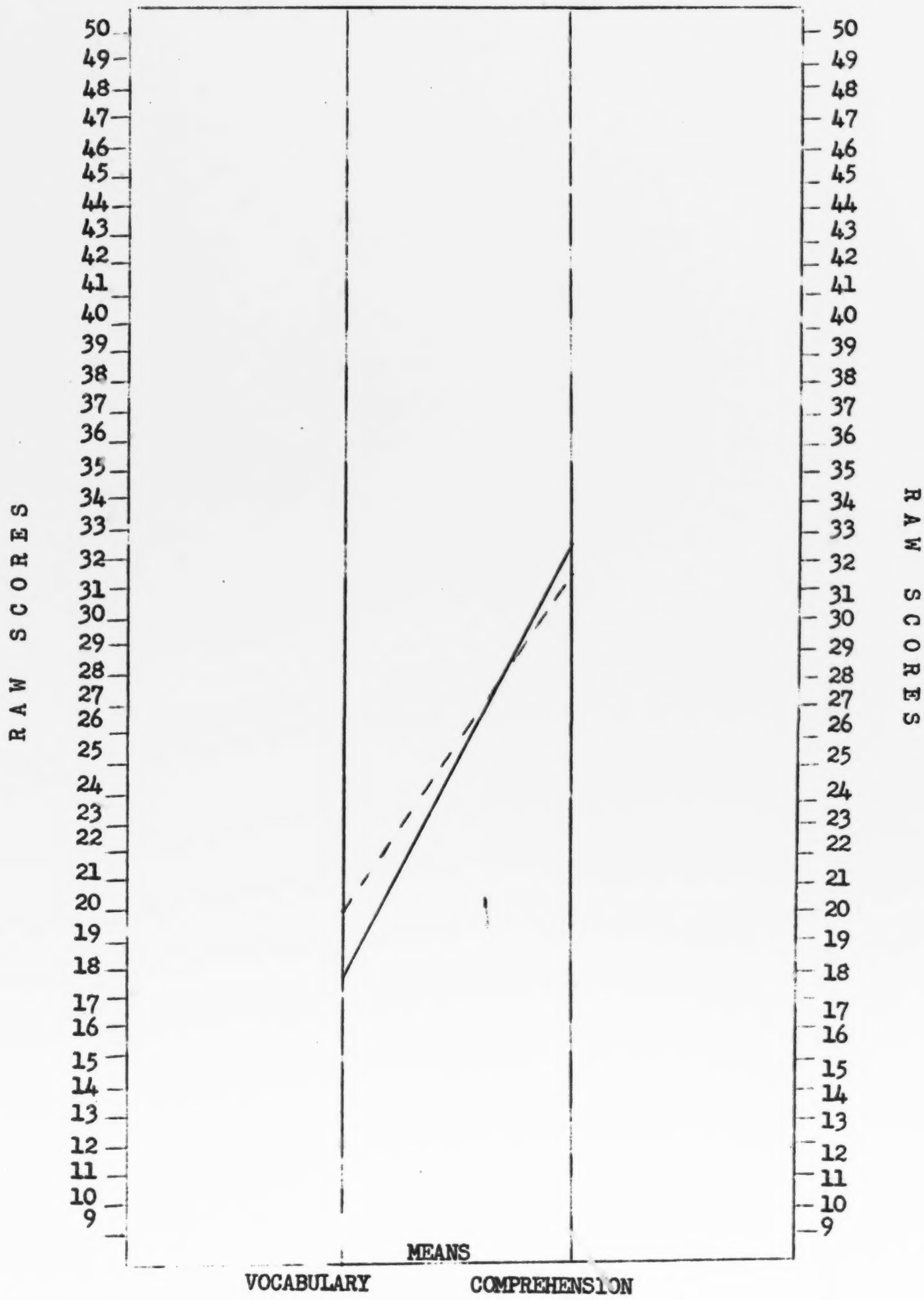


FIGURE 3

MARQUETTE EXPERIMENTAL GROUP
PRE AND POST TEST DIFFERENCES

4th GRADE 9th MONTH AND BELOW

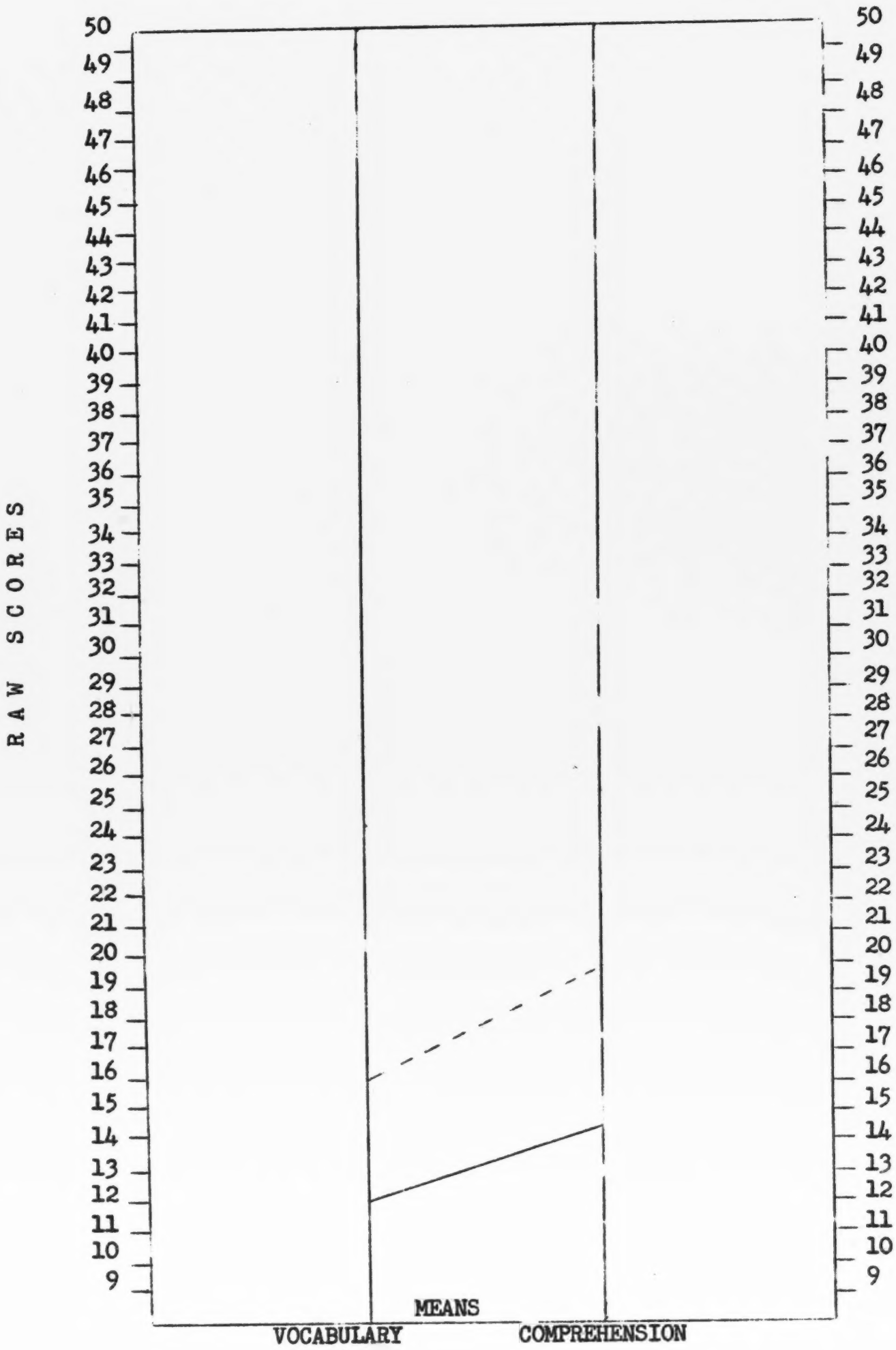


FIGURE 4

MARQUETTE EXPERIMENTAL GROUP
PRE AND POST TEST DIFFERENCES

5th GRADE AND ABOVE

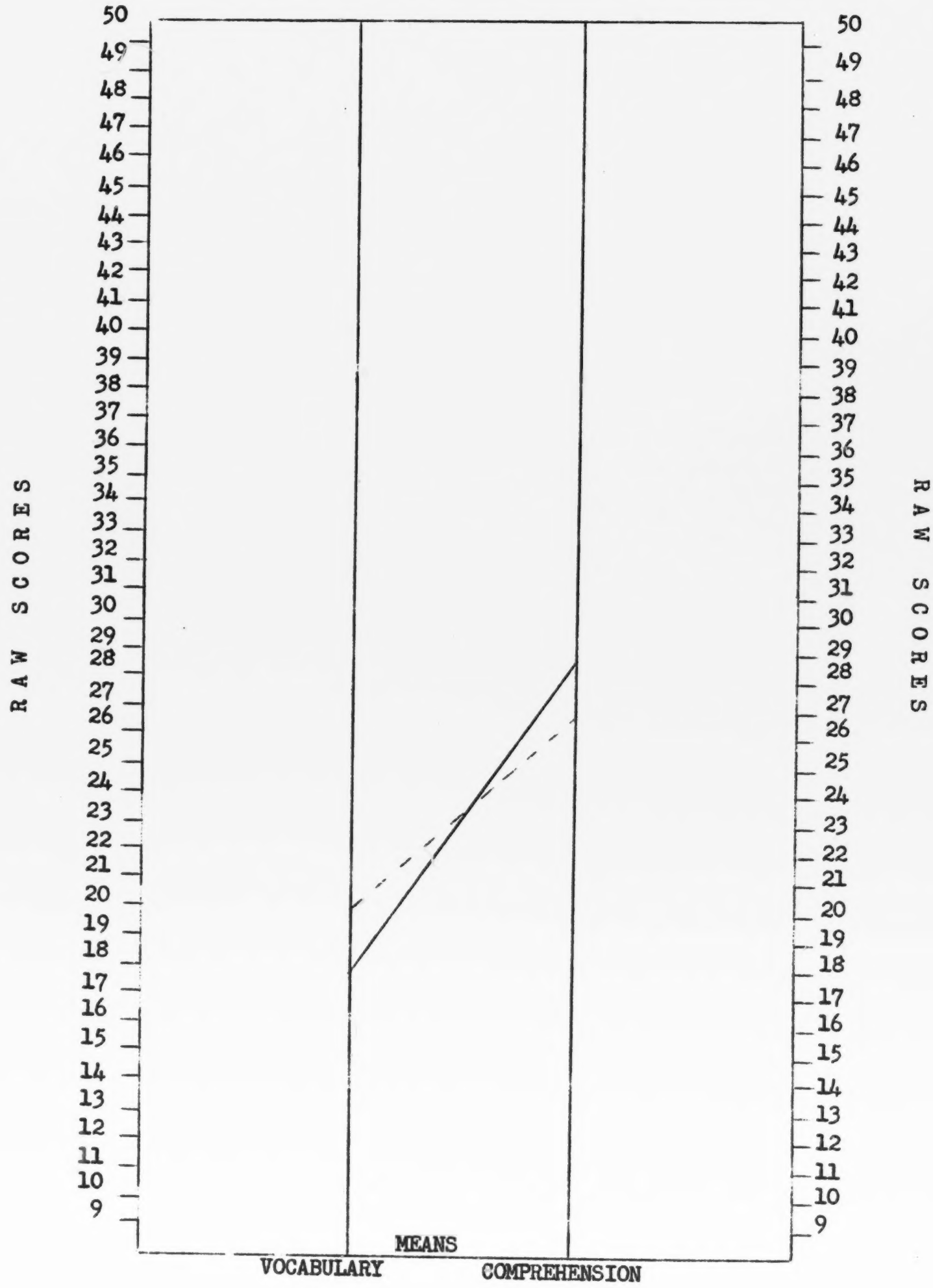


FIGURE 5

OMAHA CONTROL GROUP
PRE AND POST TEST DIFFERENCES

4th GRADE 9th MONTH AND BELOW

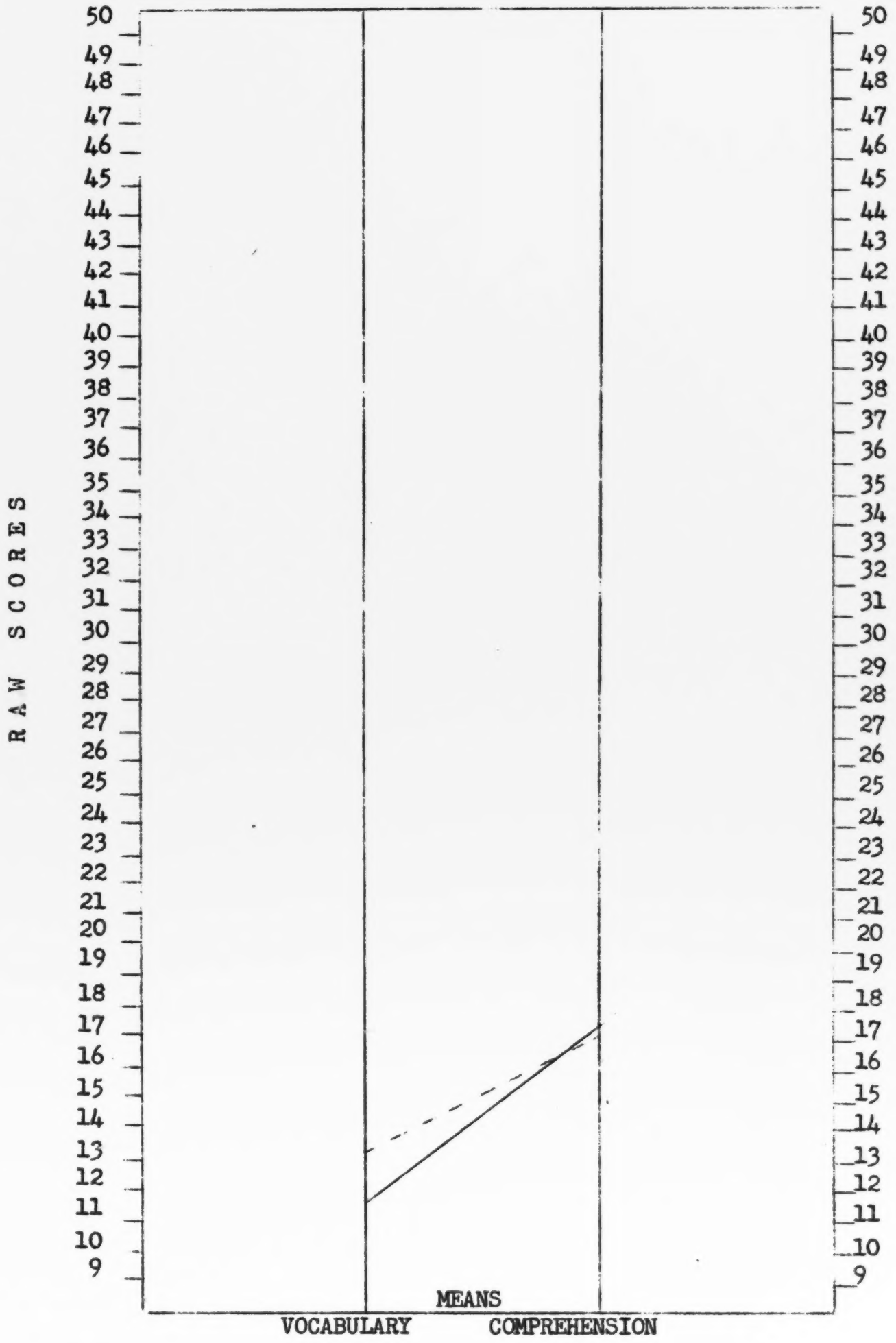


FIGURE 6

OMAHA CONTROL GROUP
PRE AND POST TEST DIFFERENCES

5th GRADE AND ABOVE

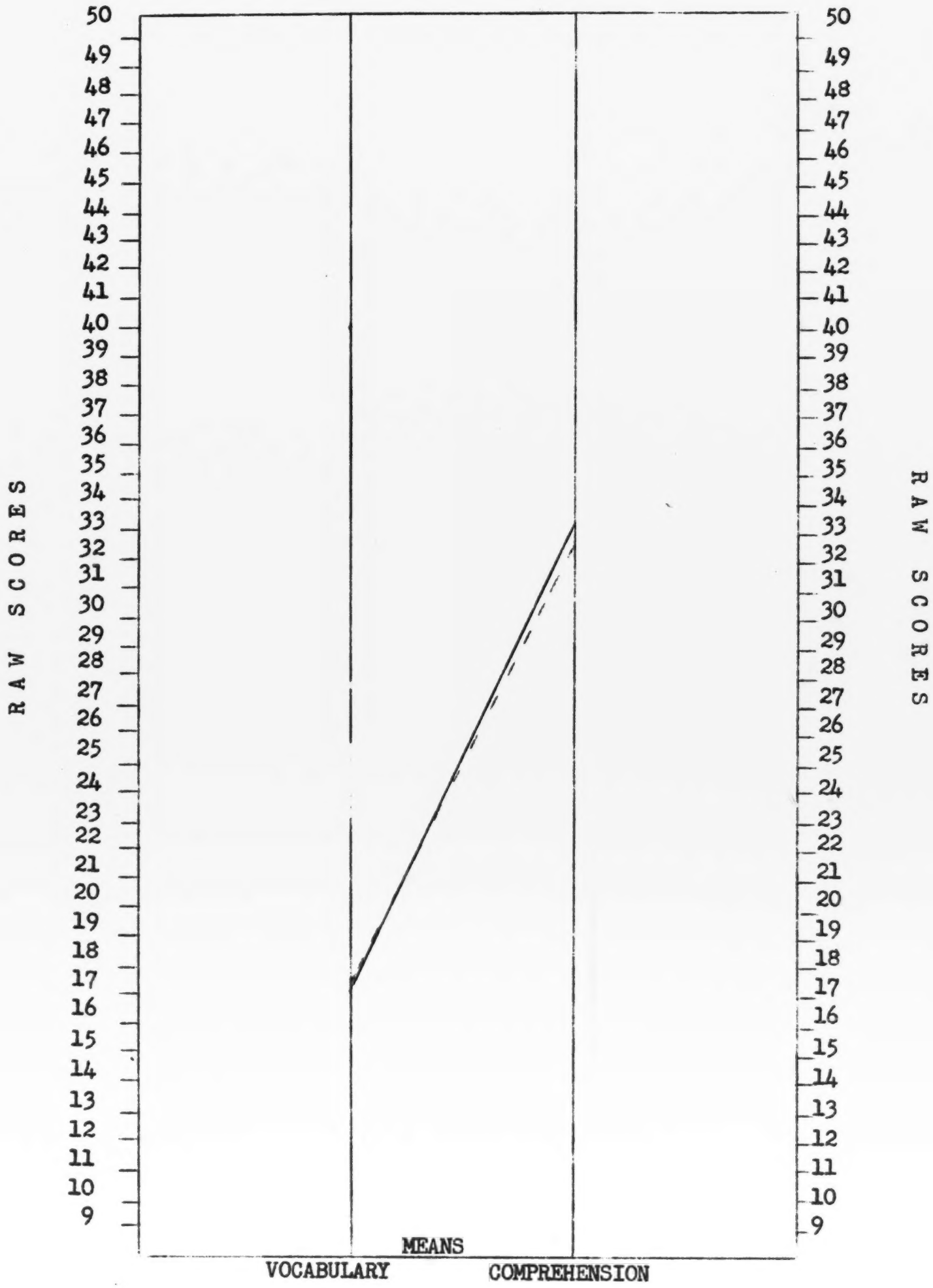


FIGURE 7

MARQUETTE CONTROL GROUP
PRE AND POST TEST DIFFERENCES

4th GRADE 9th MONTH AND BELOW

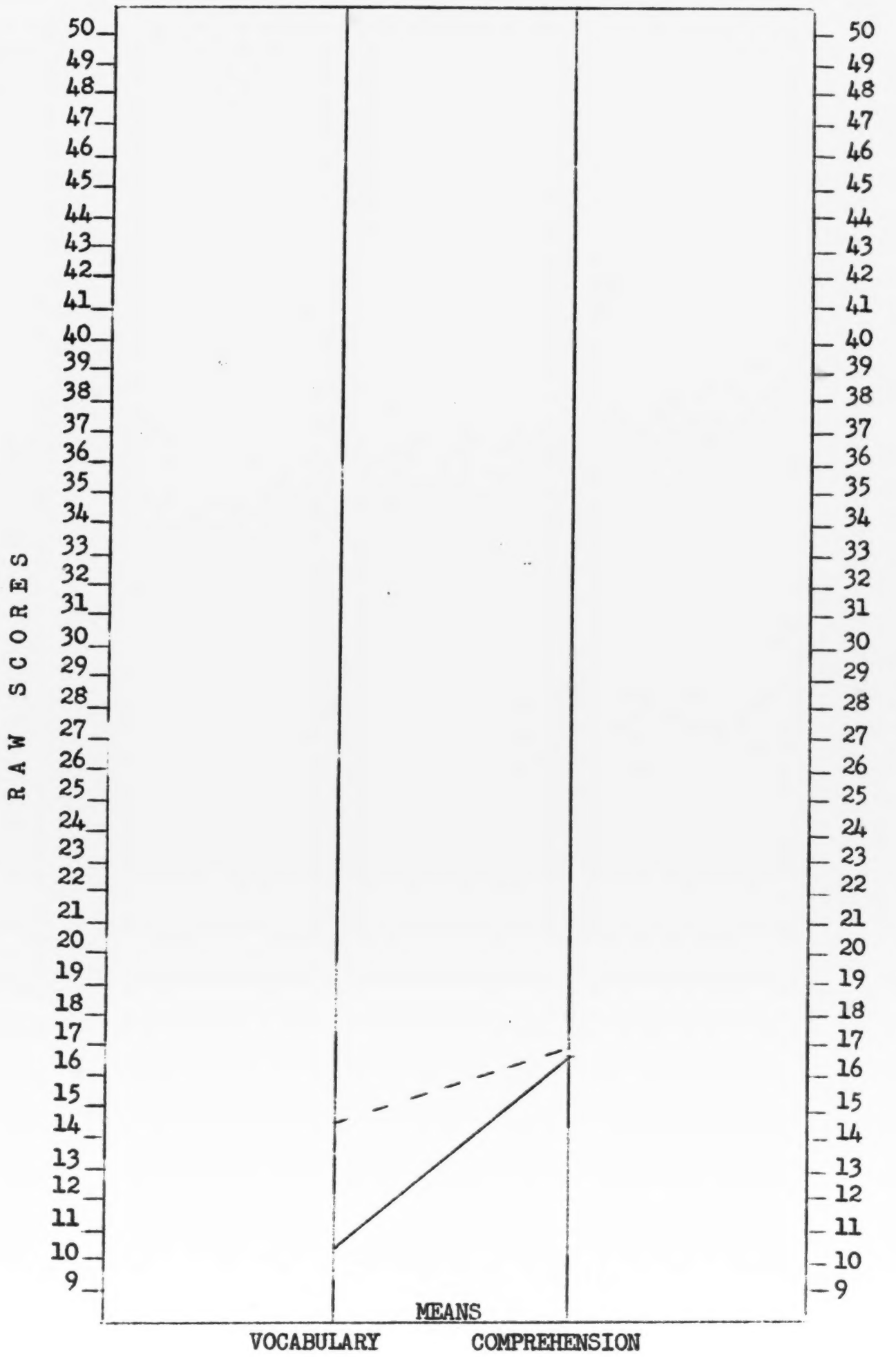
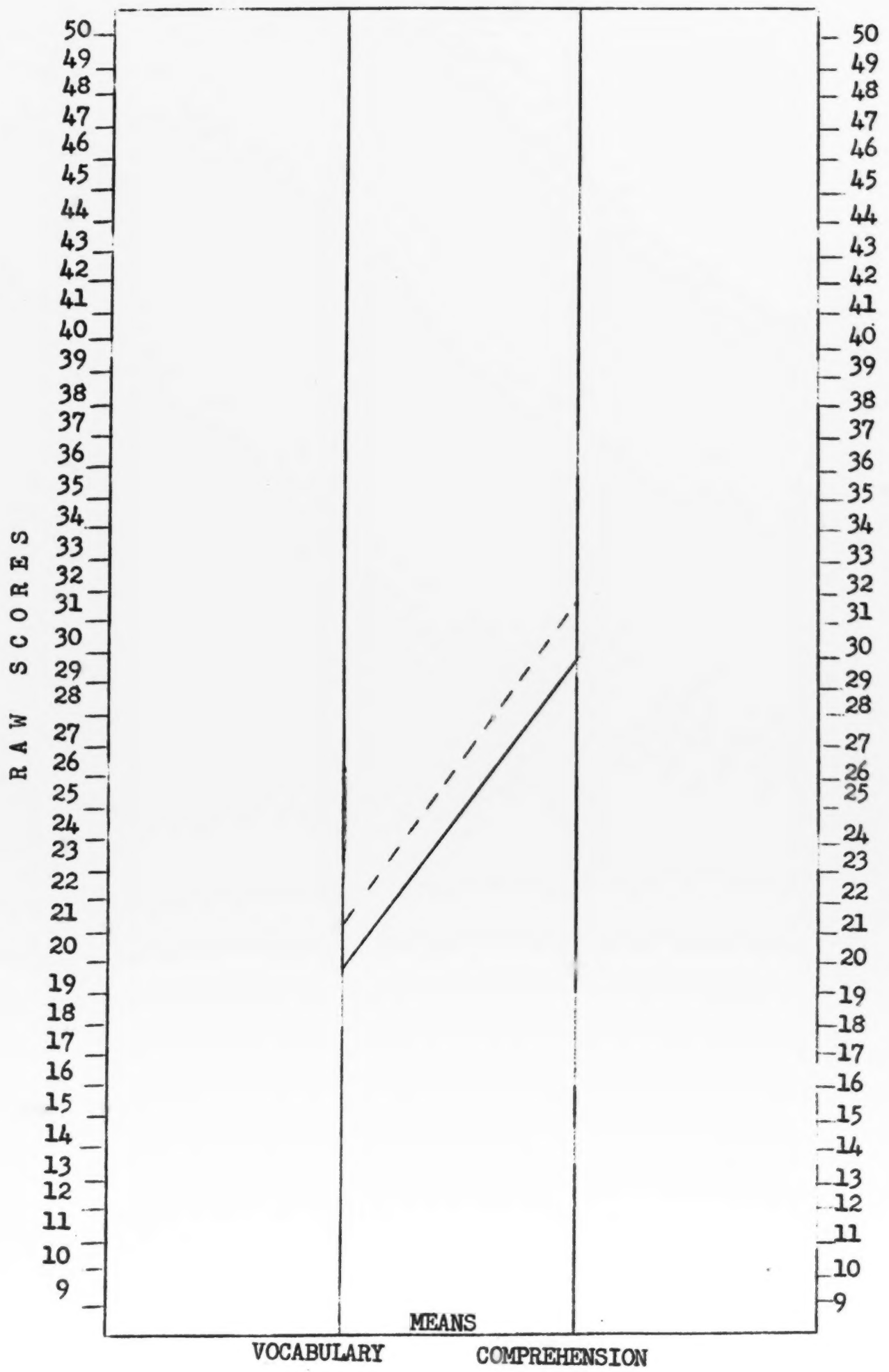


FIGURE 8

MARQUETTE CONTROL GROUP
PRE AND POST TEST DIFFERENCES

5th GRADE AND ABOVE



NAME _____ HGC _____ AGE _____

DATE OF TEST _____

GATES - MAC GINITIE READING TEST
WOMENS JOB CORPS NORMS
PROFILE SHEET